

Amendments to the Claims

1. (Previously presented) A method for operating one or more electrolysis cells for production of aluminium, the cell comprising inert or substantially inert anodes, where an oxygen containing gas evolved by the electrolysis process in the cell is gathered and removed therefrom,
wherein
the oxygen containing gas is introduced into a combustion chamber where it is reacted with a carbon containing gas in a combustion process.
2. (Currently amended) A method in accordance with claim 1,
wherein
at least one part of ~~the~~ a reaction process stream from the combustion chamber is used in an energy conversion process.
3. (Previously presented) A method in accordance with claim 2,
wherein
the energy conversion process comprising expansion of the reaction process stream in a gas-turbine for conversion of energy to mechanical energy.
4. (Currently amended) A method in accordance with claim 3,
wherein
the gas-turbine is arranged to drive a generator for the production of electricity;
~~preferably for use in the electrolysis cell.~~
5. (Previously presented) A method in accordance with claim 2,
wherein
at least one part of the reaction process stream containing CO₂ is used as sweep gas in the electrolysis cell.

6. (Previously presented) A method in accordance with claim 2,
wherein
at least one part of the reaction process stream is directed into a permeate side of a mixed conducting membrane system to pick up oxygen from an air stream through a retentate side of the membrane system, where said oxygen enriched stream is directed back to the combustion chamber.
7. (Previously presented) A method in accordance with claim 2,
wherein
at least one part of a reaction process stream from a second combustion chamber is directed into a permeate side of a mixed conducting membrane system to pick up oxygen from an air stream through a retentate side of the membrane system, where said oxygen enriched stream is directed back to said combustion chamber, and where an other part of the reaction process stream is directed to said first combustion chamber.
8. (Previously presented) A method in accordance with claim 1,
wherein
said carbon containing gas is derived from a fuel cell.
9. (Currently amended) A method in accordance with claim 1,
wherein
substantially all parts of CO₂ evolved ~~is~~are recovered and ~~deposited~~ stored.
10. (Previously presented) A method in accordance with claim 1,
wherein
formation of NO_x is substantially avoided.

11. (Currently amended) A method in accordance with claim 1,
wherein
thermal energy in streams derived from the combustion chamber is recovered by
vaporisation of water, whereby generated steam is utilised to generate electric power in
one or more steam turbines.
12. (Previously presented) A method in accordance with claim 1,
wherein
the oxygen containing gas is cleaned by removal of dust, electrolyte particles and
fluoride vapours before it is applied in the combustion chamber.
13. (Previously presented) A method in accordance with claim 5, wherein said at least one
part of the reaction process stream containing CO₂ is dried before it is used as the sweep
gas.
14. (Previously presented) A method in accordance with claim 3,
wherein
at least one part of the reaction process stream containing CO₂ is used as sweep gas in the
electrolysis cell.
15. (Previously presented) A method in accordance with claim 4,
wherein
at least one part of the reaction process stream containing CO₂ is used as sweep gas in the
electrolysis cell.
16. (Currently amended) A method in accordance with claim 2,
wherein
substantially all parts of CO₂ evolved is are recovered and ~~deposited~~ stored.

17. (Currently amended) A method in accordance with claim 3,
wherein
substantially all parts of CO₂ evolved ~~is~~ are recovered and ~~deposited~~ stored.
18. (Currently amended) A method in accordance with claim 4,
wherein
substantially all parts of CO₂ evolved ~~is~~ are recovered and ~~deposited~~ stored.
19. (Previously presented) A method in accordance with claim 2,
wherein
formation of NO_x is substantially avoided.
20. (Previously presented) A method in accordance with claim 3,
wherein
formation of NO_x is substantially avoided.
21. (New) A method in accordance with claim 4, wherein the electricity is for use in the
electrolysis cell.